external surface. Support for the amendment can be found in Applicants' specification at paragraph 0063 and in FIGS. 30A, 30B, 34A, and 34B.

Claims 43-46 are currently pending and presented for reconsideration. In view of the above amendments and following remarks, reconsideration and withdrawal of all grounds of objection and rejection are respectfully requested.

Drawings

FIG. 30A was objected to because it appeared as though the slit cuts through the collar and the angle of the slit does not correlate with the angle of the slit in FIG. 30B. FIG. 30A is hereby amended. Approval of the proposed change is respectfully requested.

Rejection under 35 U.S.C. § 102(b)

Claims 43, 44, and 46 are rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 5,857,464 to Desai *et al.* (hereinafter "Desai"). Applicants respectfully traverse this rejection.

Desai describes an endocardial catheter that includes an end-hole valve 40 and deformable wings 34 near the distal end of the catheter. In an angiograph procedure, when contrast material is being infused into the body, the end-hole valve 40 purportedly curtails a jet of contrast material exiting the catheter at a high pressure. The wings 34 adjacent to the distal end of the catheter purportedly facilitate low pressure entry of the contrast material at a high rate of flow into the vessel. See column 2, lines 40-50, column 5, lines 45-64, and FIG. 9 of Desai.

Applicants respectfully submit that Desai does not anticipate amended independent claim 43. Amended independent claim 43 recites a medical device comprising "a compound slit extending from a generally hemispherical portion of the external surface to the at least one internal surface and into communication with the internal lumen." Desai's device discloses flaps

42 that are located on a flat distal portion of the catheter 10, as shown in FIG. 9. Desai is silent about and therefore does not teach or suggest such a slit.

Accordingly, Applicants respectfully submit that amended claim 43 is patentable over Desai. Because claims 44 and 46 depend directly from amended independent claim 43, Applicants respectfully submit that these claims are patentable as well.

Rejection under 35 U.S.C. § 103(a)

Claim 45 is rejected under 35 U.S.C. § 103(a) over Desai in view of U.S. Patent No. 6,419,659 to Phelps *et al.* (hereinafter "Phelps"). Applicants respectfully traverse this rejection.

Phelps describes a catheter 10 for the treatment of vulnerable atherosclerosis and more particularly an arrangement for the aspiration of a lipid pool within a coronary artery. The catheter 10 is hollow and enclosively supports an elongated needle 16. The needle 16 is flexible and functions as a guidewire to permit the advancement of the needle 16 and the catheter shaft 14 to the situs of a lipid pool within a coronary artery. Once at the lipid pool, the elongated needle 16 can be used to remove or treat the lipid, and inject fluids to treat the artery wall. See column 3, line 50 to column 4, line 11 of Phelps.

Phelps fails to cure the deficiencies of Desai, with respect to amended independent claim 43. Specifically, Phelps fails to teach or suggest a medical device comprising "a compound slit extending from a generally hemispherical portion of the external surface to the at least one internal surface and into communication with the internal lumen" as recited in amended claim 43. Applicants submit that no combination of Desai and Phelps could possibly have resulted in the invention recited in amended claim 43, because each of Desai and Phelps fails to teach or

suggest at least this same aspect of amended claim 43. Because claim 45 depends indirectly from amended independent claim 43, claim 45 is patentable over Desai and Phelps.

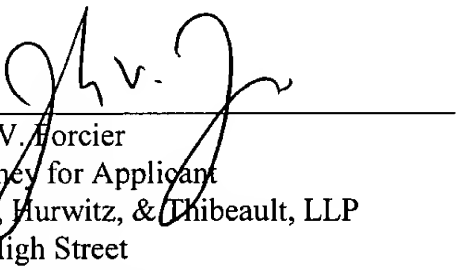
Information Disclosure Statements (IDSs)

Applicants note that initialed copies of PTO-1449 forms for Supplemental IDSs submitted by Applicants on October 7, 2002 and January 7, 2003, together listing references A12-A15, B1-B2, and C1, have not been returned and therefore respectfully request such action by the Examiner. Copies of these 1449 forms are submitted along with this paper for the Examiner's convenience.

CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration, withdrawal of all grounds of objection and rejection, and allowance of claims 43-46 in due course. The Examiner is invited to contact Applicants' undersigned representative by telephone at the number listed below to discuss any outstanding issues.

Respectfully submitted,



Date: March 17, 2003
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Fax No. (617) 790-0100

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MARKED UP VERSION SHOWING AMENDMENTS

In the specification:

Page 21, paragraph 0062:

Fig. 29B illustrates a medical device 368 that has a cross-shaped compound slit valve ~~272~~ 372. Fig. 29C illustrates a medical device 368 that has a T-shaped compound slit valve ~~272~~ 372. Fig. 29D illustrates a medical device 368 that has a double T-shaped compound slit valve ~~272~~ 372. The compound slit valve 372 can be oriented in any direction on the catheter 370, and can be disposed on a distal end of the catheter 370. As discussed with respect to FIG. 29A, the compound slit valve 372 includes a plurality of intersecting slits 371. The slits 371 shown in FIGS. 29B-29D intersect at right angles, i.e., θ equals 90 degrees; however, the value θ of may vary from about 1 degree to about 179 degrees.

In the claims:

43. (Amended) A medical device comprising:

an elongate catheter including an external surface and at least one internal surface defining an internal lumen that extends longitudinally along at least a portion of the elongate catheter; and

a compound slit extending from a generally hemispherical portion of the external surface to the at least one internal surface and into communication with the internal lumen.

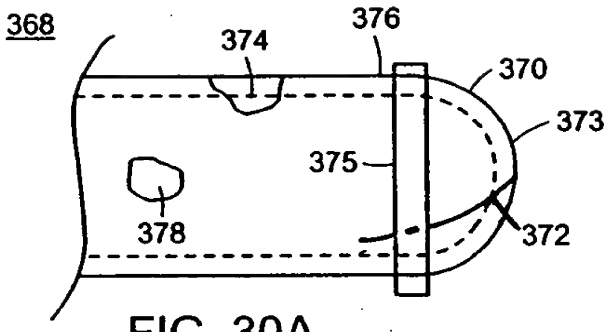

FIG. 30A

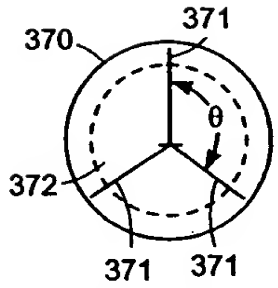

FIG. 30B

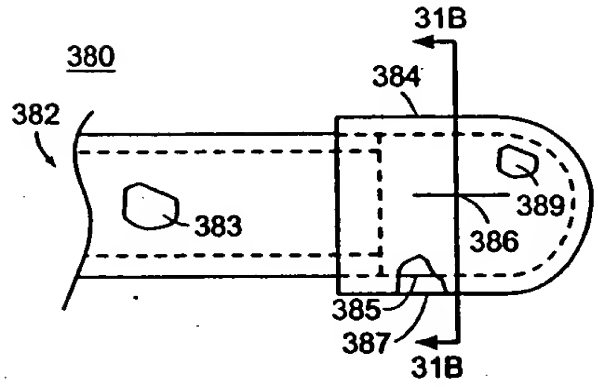

FIG. 31A

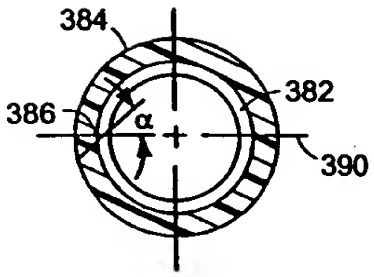

FIG. 31B

Approved
3/24/03